Readiness of Small and Medium-Sized Enterprises in the Bangkok Metropolitan Area to Integrate AI into Their Marketing Strategies

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Abstract

With its ability to improve productivity, customize client experiences, and allocate resources as efficiently as possible, artificial intelligence (AI) is completely changing the marketing industry. Small and medium-sized businesses (SMEs) face particular challenges that restrict their preparedness for such advances, even though major organizations frequently take the lead in implementing AI. This study looks into how prepared SMEs in the Bangkok Metropolitan Area are for incorporating AI in their marketing plans. The research highlights important facilitators and obstacles using a mixed-methods approach that includes surveys and interviews with SME owners and managers.

The results show a reasonable degree of awareness and adoption, with the biggest obstacles being a lack of knowledge, cultural resistance, and financial limitations. The research paper concludes with suggestions for improving AI preparedness, such as focused training initiatives, laws that support them, and sector-specific approaches to increase competitive advantage in the market.

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Keywords: Artificial intelligence, Marketing Mix, SMEs, Bangkok

Introduction

Background on AI Adoption in Marketing

The way business's function and engage with customers has been completely transformed by the use of artificial intelligence (AI) into marketing strategy. Organizations have been able to improve decision-making, optimize marketing efforts, and increase consumer engagement with AI-driven solutions including chatbots, machine learning algorithms, and predictive analytics (Kaplan & Haenlein, 2019). These tools enable businesses to offer customized content, forecast customer behavior, and analyze vast amounts of data—all of which led to improved outcomes.

Due to a number of obstacles, such as limited funding, a lack of technical expertise, and difficulties allocating resources, small and medium-sized businesses (SMEs) are lagging behind major firms in the adoption of AI technology. SMEs might gain from integrating AI, nevertheless, when the technology becomes more widely available and reasonably priced (Paschen et al., 2020).

Importance of SMEs in Thailand's Economy

Thailand's economy is largely dependent on SMEs, which represent more than 99% of all businesses in the nation and contribute a substantial contribution to both employment and GDP (World Bank, 2021). SMEs in a variety of industries, including manufacturing, retail, services, and technology, are found in the Bangkok Metropolitan Area. In a market that is quickly digitizing, these companies are under increasing pressure to upgrade their processes in order to stay competitive. According to the Ministry of Digital Economy and Society (2021), AI presents these businesses with the chance to improve customer connections, increase productivity, and streamline operations.

Research Objective

1. Evaluate SMEs' present awareness, comprehension, and application of AI.
2. Determine the main obstacles to the adoption of AI, such as monetary, technological, or other issues.
3. Draw attention to possible facilitators, such as government initiatives, training programs, and alliances with tech companies.
4. Provide doable suggestions to close the awareness-to-implementation gap.

Literature Review

Overview of AI Technologies in Marketing

Artificial intelligence (AI) technologies have become an integral part of modern marketing strategies, enabling businesses to enhance operational efficiency, optimize decision-making processes, and foster deeper connections with their customers. By leveraging AI, companies can automate repetitive tasks such as data analysis, campaign optimization, and customer service, thereby freeing up human resources for more strategic roles. Artificial intelligence (AI) technologies are essential to contemporary marketing because they let companies automate procedures, improve decision-making, and increase client interaction. Real-time personalization, sentiment analysis, and consumer segmentation are just a few of the uses for tools like computer vision, machine learning, and natural language processing (Davenport & Ronanki, 2018).

Benefits of AI Adoption for SMEs

For SMEs, implementing AI can provide a number of advantages, such as:

Better Customer Insights

AI empowers SMEs to extract actionable insights from large volumes of customer data that would otherwise be overwhelming to process manually. By analyzing customer behaviors, preferences, and interactions across multiple channels, AI tools can segment audiences based on their unique characteristics and needs. For example, sentiment analysis can identify customer attitudes toward products or services, enabling businesses to address concerns proactively. Additionally, these insights support the creation of targeted marketing campaigns that resonate with specific customer groups, increasing engagement and conversion rates. Such a data-driven approach helps SMEs not only to better understand their market but also to anticipate future trends and adjust strategies accordingly (Thakur & Workman, 2020).

Improved Decision-Making

The ability to make informed decisions quickly is critical for SMEs operating in competitive markets. AI-driven analytics provide SMEs with deep insights into their business performance and external market conditions. Predictive models, for example, use historical data to forecast customer demand, helping businesses optimize inventory levels and prevent overstocking or stockouts. Real-time data analysis can also highlight emerging trends, allowing SMEs to pivot their strategies promptly to capitalize on new opportunities. Furthermore, AI can identify inefficiencies in current operations, suggesting adjustments to improve profitability. By relying on AI for accurate and timely insights, SMEs can reduce the risks associated with decision-making and build resilience in the face of market fluctuations (Oliveira & Martins, 2019).

Personalized Experiences

In an era where customers increasingly expect personalized experiences, AI technologies offer SMEs the tools to meet and exceed these expectations. Advanced AI systems, such as recommendation engines and natural language processing algorithms, enable businesses to deliver tailored content, product suggestions, and communication strategies. For example, an e-commerce SME can analyze browsing history, purchase patterns, and demographic information to curate personalized product recommendations for each user. Similarly, AI can optimize email campaigns by crafting messages that resonate with individual preferences, boosting click-through and engagement rates. Personalized customer experiences foster stronger relationships, increase customer loyalty, and enhance the brand image of SMEs. Additionally, these experiences drive revenue growth by encouraging repeat purchases and higher customer lifetime value (Kaplan & Haenlein, 2019).

Challenges SMEs Face in Adopting AI

SMEs discover it difficult to adopt AI despite its benefits for a number of reasons, including:

Financial Barriers

SMEs often operate with limited budgets, which restricts their ability to invest in the infrastructure and talent required to adopt AI. According to Delgado and Mills (2020), the cost of acquiring cutting-edge AI tools and systems, such as machine learning platforms, data

processing hardware, and AI-powered software, is prohibitive for many SMEs. Furthermore, implementing AI solutions often requires hiring or training personnel with specialized skills, such as data scientists, AI engineers, and IT specialists, which adds to the financial burden. Many SMEs also struggle to secure external funding or loans due to stringent lending requirements, making it challenging to prioritize AI investments over other operational needs. These financial constraints lead to a reliance on outdated technologies, which hampers competitiveness and limits growth opportunities.

Technological Restrictions

Implementing AI demands a robust technological foundation, including reliable internet connectivity, advanced computing infrastructure, and seamless integration with existing business systems. However, SMEs frequently lack these resources, making it difficult to adopt and scale AI solutions effectively. According to Davenport and Ronanki (2018), SMEs often experience challenges such as insufficient IT infrastructure, limited access to quality datasets, and outdated software systems that are incompatible with AI tools. Moreover, SMEs may lack the technical expertise to evaluate AI vendors or determine the best-fit solutions for their unique needs. The absence of a dedicated IT team or department further complicates the implementation process, leaving SMEs reliant on third-party providers, which may not always align with their strategic goals or budgets.

Opposition to Change

Organizational and cultural resistance is a significant barrier to the adoption of AI within SMEs. Employees and managers may be hesitant to embrace new technologies due to fear of job displacement, lack of understanding, or skepticism about the potential benefits. Paschen et al. (2020) highlight that many SMEs operate with entrenched processes and workflows, making it difficult to introduce innovative solutions without disrupting existing operations. This inertia is often exacerbated by a lack of leadership support for digital transformation initiatives, as decision-makers may prioritize immediate operational concerns over long-term innovation. Additionally, the absence of clear communication and training programs about the value and functionality of AI can further entrench resistance among staff, leading to missed opportunities for leveraging technology.

Data Privacy Issues

Effective AI implementation requires access to large volumes of high-quality data, which raises significant concerns about data privacy and security. Many SMEs are ill-equipped to manage and protect sensitive customer information, such as personal identifiers, financial details, or behavioral data. Thakur and Workman (2020) note that SMEs often lack comprehensive data governance frameworks, which leaves them vulnerable to breaches and regulatory non-compliance. Furthermore, the costs of implementing robust cybersecurity measures, such as encryption protocols, secure data storage, and regular audits, can be prohibitive for SMEs. This lack of preparedness not only exposes businesses to legal and

financial risks but also erodes customer trust, which is critical for sustaining long-term relationships in a competitive market. SMEs also face difficulties in navigating complex data protection regulations, such as the General Data Protection Regulation (GDPR), which adds another layer of complexity to AI adoption.

Regional Context: AI Adoption in Southeast Asia

Governments and the private sector in Southeast Asia are increasingly recognizing artificial intelligence (AI) as a pivotal driver for economic growth and global competitiveness. As digital transformation accelerates across the region, countries are actively working to integrate AI technologies into various industries to enhance productivity, drive innovation, and improve service delivery. However, the level of AI readiness among small and medium-sized enterprises (SMEs) in Southeast Asia varies significantly due to differences in infrastructure, access to resources, and technological adoption rates (Yokoi & Dang, 2021).

Southeast Asia's Growing Emphasis on AI

In countries like Singapore, Malaysia, Vietnam, and Thailand, governments are leading the charge by implementing national AI strategies and policies that align with their broader digital economy goals. These strategies emphasize the development of AI talent, research and development (R&D), and the establishment of regulatory frameworks that encourage innovation while protecting consumer interests. For example, Singapore's National AI Strategy outlines plans to integrate AI into key sectors such as healthcare, transportation, and finance, while providing SMEs with the resources to adopt these technologies.

Similarly, Thailand's Thailand 4.0 initiative underscores the importance of AI in driving technological innovation and economic restructuring. The program aims to transition Thailand from a manufacturing-based economy to one that prioritizes high-value industries like robotics, biotechnology, and artificial intelligence. As part of this vision, the Thai government is investing in infrastructure, such as high-speed internet, data centers, and AI research hubs, to create a conducive environment for digital innovation. Incentives like tax breaks, grants, and subsidies are also being introduced to encourage SMEs to embrace AI and other advanced technologies (Ministry of Digital Economy and Society, 2021).

Challenges to AI Readiness in Southeast Asia's SMEs

While governments are providing significant support, SMEs face unique challenges that affect their readiness for AI adoption. Many businesses in the region are still in the early phases of digital transformation, struggling to implement even basic digital tools like enterprise resource planning (ERP) software or e-commerce platforms. This foundational gap hinders their ability to leverage more advanced technologies like AI.

Additionally, disparities in access to resources such as funding, skilled labor, and reliable infrastructure create uneven progress among SMEs. Urban SMEs often benefit from proximity to technology hubs, training facilities, and a tech-savvy talent pool, while rural SMEs

may lack these advantages. Moreover, cultural and linguistic diversity across Southeast Asia adds complexity to AI adoption, as solutions must often be customized to local contexts.

Thailand 4.0 and Its Focus on SMEs

Within the framework of Thailand 4.0, SMEs are recognized as critical contributors to the country's economic transformation. The Thai government has launched various programs to integrate AI into SME operations, such as the Digital Transformation Fund, which provides financial support for adopting digital technologies, including AI. Training initiatives aim to upskill workers and equip SME owners with the knowledge needed to understand and deploy AI solutions effectively.

By fostering an environment that supports AI adoption, Thailand and its Southeast Asian neighbors are creating opportunities for SMEs to overcome traditional barriers, increase efficiency, and compete on a global scale. However, achieving widespread AI readiness will require sustained investment, inclusive policies, and a strong commitment from both the public and private sectors.

Methodology

Research Design

In order to get a complete picture of SME readiness, this study uses a mixed-methods approach, integrating quantitative surveys and qualitative interviews.

Population and sampling

The population of the study is SMEs in Thailand having over 3 million firms according to the Office of Small and Medium Enterprises. The stratified random sampling technique to be utilized of different SMEs prior to simple random sampling for the final selection as SMEs using latest AI based technologies as the most potential respondents for this study. According to Siddiqui, Bajwa, Elahi, & Fahim (2016) the sample size would be determined as 20 times the number of questions of constructs. The total number of constructs of this study is placed at 15; therefore, the total sample size would be determined as 300 (or 15 x 20). However, 320 responses were done. A standardized questionnaire about the awareness, use, and perception of AI technology was given to 320 SMEs in the Bangkok Metropolitan Area. Sample size determination procedure is used to get optimum and reasonable information. In this study, both probability (simple random sampling) and nonprobability (convenience, quota, purposive, and judgmental) sampling methods is used as the nature of the industries are varied. This is because of the characteristics of data sources which will permit the researchers to follow the multi-methods. Out of 320 respondents.

Research instrument

Major Instrument being used for collecting data in quantitative research is a questionnaire composed of 3 parts as shown below

Part I is composed of personal data of the respondents: 1. Age 2. Sex 3. Education level 4. Role in the organization 5. Company sales turnover

Part II is composed of opinion on Causal Relationship Model of Artificial Intelligence on Marketing Mix Preparedness of Small and Medium Enterprises in Bangkok Metropolitan Area pertaining to the following contexts: 1. Technological context 2. Organizational context 3. Environmental context 4. Major Marketing mix 5. Readiness of SMEs

Part III is composed of Open-End Questions for their opinion and suggestion about Causal Relationship Model of Artificial Intelligence on Marketing Mix Preparedness of Small and Medium Enterprises in Bangkok Metropolitan Area. An Instrument for qualitative data collection: In-depth interview

Data analysis

Quantitative data analysis

Under the data analysis, exploration of data is made with descriptive statistics and graphical analysis. The analysis includes exploring the relationship between variables and comparing groups how they affect each other. This is done using cross tabulation/chi square, correlation, and factor analysis and using nonparametric statistic and partial least squares structural equation modeling (PLS-SEM).

Qualitative data analysis

Qualitative data analysis is used for triangulation of the quantitative data. The interview, observation, and report records are used to support the findings. The analysis is incorporated with the quantitative discussion results in the data analysis parts. Research shows that organizations encounter several obstacles when utilizing GenAI, such as a lack of qualified workers about the caliber of the data being used, and insufficient financial resources for the purchase and advancement of the technology required for successful deployment.

Results and Discussion

Demographics

59.4% (190/320) of respondents were female and the remaining was male. About 70% (226/320) of respondents were in the age range of 31-50 years and with Bachelor's (149/320; 46.6%) and Master's degree (127/320; 39.7%). In the context of occupation, the participants were mainly employed as business owner/senior executive/managing director (105/320, 32.8%) and earned an income of more than 5,000,001 Baht (50.1%).

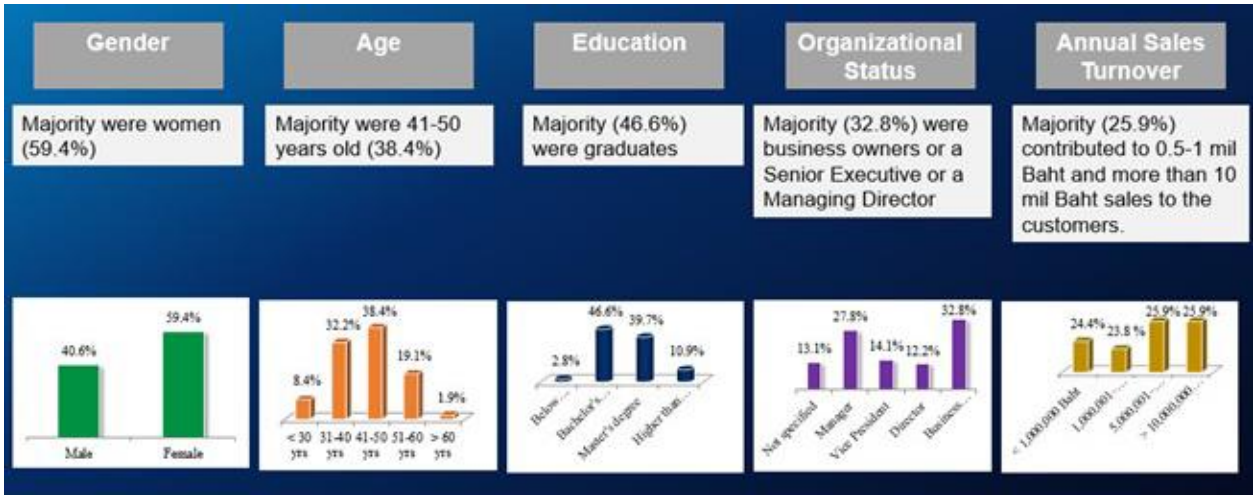

Figure 1: Respondent demographic

Current State of AI Readiness

According to the research, only 25% of SMEs have started incorporating AI technology into their marketing plans, despite the fact that 65% of them are aware of them. The majority of enterprises are still in the early phases of research and development, with little real-world application.

The findings of present study indicated a significant relationship between organizational context and the preparedness of SME in the adoption of AI. Further, this relation partially mediated the marketing mix.

Table below shows the correlation between the study variables

S.N.	Variables	Mean	SD.	1	2	3	4	5
1	Preparedness of the SMEs	4.02	1.01	1				
2	Technological Context	3.98	1.05	0.745**	1			
3	Organizational Context	3.95	1.08	0.789**	0.800**	1		
4	Environmental Context	3.59	0.88	0.658**	0.722**	0.721**	1	
5	Major Marketing Mix	3.92	1.10	0.835**	0.805**	0.802**	0.746**	1

Barriers to AI Adoption

The adoption of artificial intelligence (AI) presents significant opportunities for small and medium-sized enterprises (SMEs) to enhance efficiency and competitiveness. However, a range of challenges continues to hinder AI adoption, particularly in the areas of financial capacity, expertise availability, and cultural attitudes.

Financial Constraints

One of the most pressing obstacles for SMEs is their limited financial capacity to invest in AI technologies and infrastructure. According to Delgado and Mills (2020), over 70% of SMEs cite financial limitations as a significant barrier to adopting AI solutions. Implementing AI involves substantial upfront costs, including purchasing or subscribing to AI software, upgrading

hardware to handle advanced computational tasks, and securing robust cloud storage solutions for data management. In addition, integrating AI systems often requires ongoing expenses, such as system maintenance, updates, and licensing fees.

For many SMEs, these investments are compounded by limited access to affordable financing. Traditional lenders may view AI investments as high-risk due to uncertain returns, and SMEs often lack the collateral or credit history needed to secure loans. Consequently, SMEs are forced to prioritize immediate operational needs over long-term technological advancements. These financial constraints not only delay AI adoption but also prevent SMEs from staying competitive in a rapidly digitizing economy.

Lack of Expertise

The deployment and management of AI solutions demand specialized knowledge and skills, including expertise in data science, machine learning, and software engineering. Kaplan and Haenlein (2019) emphasize that many SMEs struggle to find or afford qualified professionals with the technical know-how required to implement and optimize AI technologies.

This skills gap is further exacerbated by a lack of internal training programs and resources for upskilling existing employees. Unlike large corporations, SMEs often lack dedicated IT departments, making it difficult to assess technological needs, choose the right AI tools, and manage complex implementations. Additionally, the absence of technical expertise can lead to suboptimal use of AI systems, reducing the potential return on investment and deterring future technological initiatives.

Cultural Resistance

Cultural and organizational resistance to change is another major challenge hindering AI adoption among SMEs. Paschen et al. (2020) note that many businesses exhibit rigidity in their workflows, with decision-makers and employees often reluctant to deviate from traditional practices. This resistance can stem from a fear of failure, a lack of understanding about the benefits of AI, or concerns about job displacement.

In many SMEs, the perception persists that AI is complex, risky, or primarily designed for large enterprises, leading to hesitation in exploring its potential. Resistance may also arise from a misalignment between leadership and employees regarding the value of innovation. While leaders might see AI as a means to enhance efficiency, employees may view it as a threat to their roles, especially in industries where automation could replace routine tasks.

To overcome this resistance, SMEs need strong change management strategies that include transparent communication about AI's potential benefits, as well as training programs to alleviate concerns and build confidence in new technologies. Without such efforts, cultural inertia can stifle innovation and limit the ability of SMEs to leverage AI effectively.

Perceived Benefits of AI for SMEs

The integration of artificial intelligence (AI) into business operations provides significant benefits that enable small and medium-sized enterprises (SMEs) to enhance their efficiency, improve customer engagement, and gain a competitive edge. The following subsections detail these perceived benefits:

Increased Efficiency and Cost Savings

AI technologies are transformative in streamlining operations and automating repetitive tasks. According to Chui et al. (2018), AI enables businesses to reduce operational costs by automating labor-intensive processes such as data entry, inventory management, and customer service. For instance, chatbots powered by natural language processing (NLP) can handle customer inquiries 24/7, reducing the need for extensive customer support staff while improving response times.

AI-driven tools also optimize resource allocation by analyzing real-time data and providing actionable insights. For example, predictive maintenance systems use AI algorithms to monitor equipment performance, reducing downtime and lowering maintenance costs. These efficiencies free up time and resources, allowing SMEs to focus on core business activities and strategic growth opportunities.

Enhanced Customer Targeting and Retention

AI empowers SMEs to understand their customers more deeply and personalize their marketing strategies effectively. Thakur and Workman (2020) highlight how AI tools analyze vast amounts of customer data to identify patterns, preferences, and behaviors. This level of insight allows SMEs to segment their audience accurately and create tailored marketing campaigns that resonate with specific customer groups.

Additionally, AI-based recommendation engines, commonly used in e-commerce, suggest products or services based on a customer's browsing and purchase history, boosting cross-selling and upselling opportunities. Enhanced personalization not only improves customer satisfaction but also strengthens brand loyalty, increasing retention rates. SMEs that adopt AI-driven customer relationship management (CRM) systems can further leverage data analytics to predict customer needs, proactively address issues, and build long-lasting relationships.

Improved Competitive Positioning

In a rapidly evolving market, SMEs that embrace AI can achieve a significant competitive advantage. Oliveira and Martins (2019) emphasize that AI adoption allows SMEs to compete with larger corporations by enabling them to operate smarter and faster. Advanced analytics and machine learning models help SMEs forecast market trends, optimize pricing strategies, and make data-driven decisions that align with evolving consumer demands.

Moreover, AI enhances supply chain efficiency by identifying bottlenecks, predicting demand fluctuations, and ensuring timely delivery of products. This capability is particularly advantageous for SMEs operating in industries where agility and responsiveness are critical. By

leveraging AI, SMEs can differentiate themselves from competitors by offering superior customer experiences, faster service, and innovative solutions.

Conclusion

Increasing AI readiness among SMEs is not just a strategic advantage but a necessity in today's rapidly evolving digital landscape. The journey towards AI adoption requires a combination of targeted training, governmental incentives, and collaborative partnerships. By addressing the financial and knowledge barriers that SMEs face, businesses can unlock the vast potential of AI to drive operational efficiencies, enhance customer experiences, and spur innovation.

For SMEs in the Bangkok Metropolitan Area, the current level of preparedness for AI adoption in marketing is only moderate, as identified in recent reports. The primary obstacles faced include a lack of knowledge about AI technologies, cultural resistance to change, and financial limitations that make AI seem out of reach for many small businesses. These challenges are common across many regions and industries, but they are not insurmountable. By implementing specific, strategic plans, SMEs can overcome these barriers and begin to harness AI's transformative power.

Education and training play a pivotal role in this transformation. By investing in workshops and online courses that are tailored to the needs of SMEs, businesses can equip their workforce with the skills necessary to effectively integrate AI into their operations. These training initiatives should be designed with practical applications in mind, ensuring that SMEs are not only familiar with the theory behind AI but also understand how to apply it to real-world business challenges. As employees gain confidence in their ability to work with AI technologies, the cultural resistance to AI adoption can also begin to fade.

Financial limitations, which remain one of the most significant barriers, can be mitigated through targeted government support. Subsidies, tax incentives, and grants can significantly reduce the upfront costs of AI adoption, making it more accessible to SMEs. Furthermore, fostering partnerships with technology providers allows SMEs to access the necessary tools and expertise without having to bear the entire financial burden themselves. Collaboration with larger technology companies can also provide SMEs with ongoing support, ensuring that they continue to make the most of their AI investments.

Stakeholder engagement is another crucial element in the AI adoption process. For SMEs to truly benefit from AI, it is important that they involve key stakeholders, from employees to customers, in the transformation process. Engaging stakeholders can help build trust, ensure a smoother transition to AI-powered operations, and align the technology with the broader goals of the business. By fostering a culture of innovation and encouraging the active participation of all stakeholders, SMEs can create an environment where AI adoption is seen as an opportunity rather than a challenge.

As AI continues to evolve, its potential to spur growth and innovation within SMEs is immense. With the right combination of training, support, and strategic partnerships, SMEs in the Bangkok Metropolitan Area—and around the world—can overcome their current limitations and position themselves for long-term success in the digital age. By embracing AI and adopting a proactive approach to readiness, SMEs can not only stay competitive but also lead the way in transforming industries and driving economic growth.

Recommendations

In the rapidly advancing landscape of artificial intelligence (AI), small and medium-sized enterprises (SMEs) face significant challenges in harnessing its potential. To increase AI readiness, SMEs must adopt strategic approaches that focus on enhancing their capabilities, ensuring access to critical resources, and fostering collaboration with external entities. Key strategies for boosting AI adoption and readiness include targeted training programs, government support, and fostering partnerships with technology providers. These strategies, when aligned with sound policy recommendations, can help SMEs overcome barriers and succeed in the AI-driven digital economy.

Training Programs: Tailoring Education to SME Needs

A crucial strategy for increasing AI readiness in SMEs is the development of tailored training programs. Yokoi & Dang (2021) highlight the importance of creating workshops and online courses that are specifically designed to meet the unique needs of SMEs. These programs should focus not only on the theoretical aspects of AI but also on practical applications and use cases that are directly relevant to the SME sector.

For SMEs to successfully implement AI technologies, it is critical to develop workforce skills that support AI deployment. These programs should aim at equipping employees with the necessary expertise to integrate AI into business operations, from data collection and analysis to machine learning and decision-making processes. Additionally, these educational initiatives should be flexible, scalable, and accessible to workers at all levels within the organization, including both technical staff and management. Training courses that emphasize the business value of AI, such as improving operational efficiency or customer experience, can further motivate SMEs to invest in AI adoption.

Government Support: Encouraging AI Investments Through Incentives

Government support plays a pivotal role in encouraging AI adoption, particularly for SMEs that may lack the financial resources to invest in cutting-edge technologies. The Ministry of Digital Economy and Society (2021) emphasizes the importance of subsidies or tax incentives that can lower the cost of AI-related investments for SMEs. Such incentives can help reduce the initial financial burden of AI implementation and make it more accessible for smaller businesses.

Moreover, governments should invest in initiatives that create an enabling environment for AI innovation. These could include grants or low-interest loans to support AI research and development, as well as the creation of public-private partnerships that leverage government resources to provide AI tools and services to SMEs at reduced costs. Policymakers can also promote AI adoption by establishing AI-driven innovation hubs or accelerators that offer technical expertise, mentorship, and networking opportunities to help SMEs accelerate their AI journey.

Partnerships: Fostering Collaboration Between SMEs and Technology Providers

Another critical strategy to boost AI readiness is fostering partnerships between SMEs and technology providers. Davenport & Ronanki (2018) argue that collaborations between SMEs and AI technology companies are essential for facilitating AI adoption, as SMEs often lack the in-house expertise to implement complex AI solutions.

By partnering with technology providers, SMEs can gain access to the necessary tools, platforms, and expertise to implement AI effectively. These partnerships can also help SMEs overcome the challenge of integrating AI into their existing systems and processes, ensuring smoother transitions to AI-driven operations. Moreover, such collaborations can provide SMEs with ongoing support in terms of training, system upgrades, and troubleshooting, allowing them to continually optimize their AI solutions.

Additionally, technology providers can offer SMEs customized AI solutions that are aligned with their business goals and industry-specific needs. This can result in more efficient implementations and quicker returns on AI investments, enhancing the long-term sustainability of AI initiatives within SMEs.

Policy Recommendations: Creating a Supportive Environment for AI

To complement the strategies outlined above, policymakers must create a supportive environment that fosters AI readiness in SMEs. This includes providing adequate financing options, developing the necessary infrastructure, and enacting legislation that supports AI adoption while safeguarding data privacy.

One of the key policy areas that need attention is data privacy and security. With AI systems relying heavily on data, ensuring that SMEs have the tools and knowledge to protect sensitive information is paramount. Policymakers should focus on developing clear, comprehensive data protection regulations that give SMEs the confidence to adopt AI while complying with data privacy laws.

In addition to data privacy legislation, governments should focus on infrastructure development, ensuring that SMEs have access to the necessary digital infrastructure (e.g., high-speed internet, cloud computing resources, and AI-optimized hardware) that supports AI integration. Providing access to these resources, particularly in underserved regions, can bridge the digital divide and enable SMEs to leverage AI technologies on equal footing with larger businesses.

Finally, the establishment of AI-focused financing programs or incentive structures can play a crucial role in ensuring that SMEs are financially equipped to embrace AI. This can include targeted loans or grants for AI research, subsidies for AI technology adoption, and tax incentives that encourage long-term investment in AI innovation.

Recommendations for the future research

1. There is a need to improve the existing policies to support digital transformation in small and medium enterprises. For future research, government policies on AI implementation in SMEs may be required.

2. The data on technology adoption and AI adoption in SMEs from other provinces of Thailand should be collected and evaluated. It is recommended to obtain secondary data from the Thai government on the AI adoption in SMEs.

3. In this study, the response was collected from the owners and employees of SMEs. To enhance the insight into AI adoption, the perception of AI vendors on the acceptance of technology by SMEs should also be explored.

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